OIL

(Includes any petroleum-based or synthetic oil that has been used, such as engine oil, sludge from used oil tanks, transmission fluid, refrigeration oil, compressor oil, hydraulic fluid, etc.)

HAZARDS & RULES

Base Materials - Hazards & Impacts

One gallon of oil can contaminate up to one million gallons of water. The effect of oil on organisms can include genetic damage, structural deformities, reduced egg volume, and reproductive failure.

Virgin (unused) oil contains low levels of carcinogenic compounds, such as benzene and toluene. In addition to these compounds, oil also contains relatively high levels of polycyclic aromatic hydrocarbons, which may be absorbed through the skin of employees who are exposed to oil. Polycyclic aromatic hydrocarbons are directly linked to a number of types of cancer, including skin tumors. Shop personnel should avoid prolonged or frequently repeated skin contact with oil by wearing impervious protective gloves and by washing hands and other exposed areas thoroughly after contact. Because oil is a combustible liquid, it must be properly handled, and oil soaked clothing must be changed to avoid a fire safety hazard.

Additives and Contaminants - Hazards & Impacts

As oil circulates through the engine, the oil may become contaminated with heavy metals, including lead. In addition, used oil is also contaminated with products of incomplete combustion, which contain a number of known carcinogens.

High concentrations of lead may make the oil a hazardous waste. Oil may also become contaminated through contact with gasoline, which could make the used oil a hazardous waste due to benzene contamination and/or flammability.

Regulatory Overview

Two environmental management options currently exist for vehicle maintenance shops with used oil. The first option is to recycle your used oil or to burn it for energy recovery under the Used Oil Rule. The second option is to dispose of your used oil, following all applicable solid and hazardous waste rules. By managing your used oil under the Used Oil Rule (rather than following the solid and hazardous waste rules), you will lessen your regulatory requirements.

Used Oil Rule (Recycling or Burning for Energy Recovery):

Complying with the Used Oil Rule means that you do not have to manage your used oil or the sludge from your used oil tank as a hazardous waste. Even if the used oil to be recycled or fuel blended is contaminated with a hazardous waste *from product formulation* or *through its intended use* (such as when contaminants mix with oil in the crankcase), the used oil is still regulated under the Used Oil Rule rather than as a hazardous waste. In order to comply with the

Used Oil Rule, you must properly manage your used oil (i.e., don't mix anything other than waste fuels with your used oil), and you must either recycle your used oil or burn it for energy recovery. Oil that is intentionally or accidentally mixed with hazardous wastes must be managed as a hazardous waste.

Under the Used Oil Rule, you may mix waste fuels with your used oil. If you do this, you should check with your hauler to ensure that your used oil meets their specifications. You should also be aware that, depending on the flash point of your used oil, it may be subject to more stringent Fire and Building Services' and DOT requirements than would otherwise be required.

Note that, under the Used Oil Rule, both re-refining and burning used oil for energy recovery are considered to be forms of recycling. Re-refining is the preferred method of managing used oil because it preserves our limited resources. However, in some instances, such as when you are disposing of sludge from the bottom of your used oil tank, or disposing of petroleum contaminated wipes, sorbents, or spill materials, burning the material for energy recovery is the better management option.

If you choose to burn your used oil in your own used oil furnace, be aware that there are additional rules that you must follow under the Used Oil Rule. Because small oil-burning furnaces are not as clean-burning or as efficient as industrial furnaces, IDEM recommends that you send your used oil to a fuel blender rather than burning it on-site.

Solid and Hazardous Waste Rules (Disposal):
Used oil that cannot be managed under the Used Oil Rule (i.e., because of contamination with a hazardous waste or other material) is subject to all applicable solid and hazardous waste rules. Under the solid and hazardous waste rules, you must make a hazardous waste determination and must manage your used oil accordingly (see Chapter 3 for information on managing hazardous wastes.)

If you determine that your used oil is not a hazardous waste, it is still prohibited from being sent to a solid waste landfill because these landfills do not accept liquid waste or waste that contains free liquids (i.e., wastes containing liquids that will readily pour.) Therefore, you must send your used oil to a facility that is capable of handling liquid waste or that can solidify the waste prior to disposal.

Other Regulations:
Regardless of whether you manage your used oil under the Used Oil Rule or as a solid or hazardous waste, there are Department of Fire & Building Services and OSHA regulations that you must follow. These regulations depend upon how you store your used oil and the quantity of used oil that you store.

INSIDE STORAGE

TANKS

- Limited to 13,250 gallons unless the shop has a sprinkler system or unless the shop has separate 1-hour fire rated control areas for each additional 13,250 gallons. Exterior walls do not have to be modified in order to meet the 1-hour fire resistant rating criteria. Therefore, a shop can designate the entire building as the fire control area if the quantity of oil stored does not exceed 13,250 gallons. [Fire & Building Services]
- Shops with sprinklers throughout the building are not limited as to the amount of oil that they can store inside the building (either in tanks or in drums.) [Fire & Building Services]
- Must have secondary containment. A 4-inch high area/sill that surrounds the tank or drums is required in order to contain spills. This spill retention area must be cleaned out following a spill or when leaking oil accumulates. [Fire & Building Services]
- Gasoline or other flammable materials should not be added to your used oil. Doing so may change the used oil's flash point, requiring that you follow more stringent requirements for inside storage. [Fire & Building Services]

OUTSIDE STORAGE

TANKS

- Must be diked or must have a 2-hour fire resistant rating. This spill retention area must be cleaned out following a spill or when leaking oil accumulates. [Fire & Building Services]
- Must be placed a minimum number of feet away from the building, the property line, and any right-of-way. Contact the Plan Review Division to determine the specific requirements that you must follow. [Fire & Building Services]
- Label the tank with the words "Used Oil."

DRUMS

- Must be stored in a recessed area to contain oil spills and/or leaks. [Fire & Building Services]
- Label the drum with the words "Used Oil."

TANKS OR DRUMS

- Outside storage areas must be graded to divert spills away from buildings or other exposures, or be surrounded with curbs at least 6 inches high and have appropriate drainage to a safe location for accumulated liquids. The storage areas must be protected against tampering or trespassing, where necessary, and must be kept free of weeds, debris, and other combustible material not necessary for storing used oil. [Fire & Building Services]

MANAGEMENT RESPONSIBILITIES

Managing your used oil may be done in a number of different ways. Listed below are the management options as well as the requirements for each of the available options. Also listed are suggested practices that you should follow in order to ease your regulatory requirements and improve the environmental health of your shop.

You Must:

! Regardless of whether you're following the Used Oil Rule or the Solid & Hazardous Waste Rules, or whether you store your used oil inside or outside, you must do the following:

- if you store your used oil in a tank, the tank must meet the Indiana Department of Fire & Building Services's requirements for class I liquids (even though used oil is a class III(b) liquid.) Note that the Indiana Department of Fire & Building Services defines "tank" as anything that holds more than 60 gallons. [Fire & Building Services]
- if storing used oil in drums, you must store no more than 13,250 gallons. [Fire & Building Services]
- instruct employees to clean hands and arms frequently if they are exposed to used oil and/or grease to prevent skin irritation. [OSHA] Employees must not use gasoline to cleanse themselves or for other cleaning purposes. [OSHA]
- instruct employees to change oil soaked clothing, as it is a fire safety hazard in addition to being a source of skin problems. [OSHA]
- clean up spills promptly. [OSHA & IDEM]
- keep oil storage containers and aboveground tanks in good condition. Drums and storage tanks used to store oil cannot be rusting or leaking.
- label all used oil storage tanks (and piping) or containers with the words "USED OIL."
- develop a Spill Prevention, Containment and Countermeasure Plan if you store oil in tanks greater than 660 gallon or have accumulative storage capacity in excess of 1,320 gallons. Call CTAP for assistance.
- report oil spills (see Section 3.8 and Section 4.5 for information on spills and reporting.)
- not apply used oil as a dust suppressant.
- not store used oil in surface impoundments (i.e., lagoons.)

! If your are following the **Used Oil Rule**, you must:

- recycle your used oil or burn it for energy recovery in an authorized device.
- not mix used oil with hazardous wastes. Note that you may mix waste fuels with your used oil, but that doing so will lower the flash point of your used oil and may require you to follow more stringent Fire & Building Services and DOT regulations than otherwise required.
- determine the halogen content of the used oil by using generator knowledge or by using a test kit for halogens (available from safety supply dealers.) If the used oil contains more than 1,000 parts per million total halogens, it is presumed to have been mixed with a hazardous waste and must be treated as a hazardous waste *unless* you can demonstrate that the source of the halogens was not from mixing a hazardous waste with your used oil. To avoid managing your used oil as a hazardous waste, do not add solvents or

anything else to your used oil.
- for off-site shipments, you must ensure that the transporter has an EPA ID number. You may transport less than 55 gallons of your own used oil (or oil that has been collected through a household do-it-yourselfer collection program) at any time to a used oil collection center or to your own aggregation point without an EPA ID number. *Note that an aggregation point is basically a collection center designed to accept small amounts of used oil and store it until enough is collected to ship it elsewhere for recycling. Aggregation points collect oil only from shops run by the same owner/operator and from individuals.*

! If you are following the **Used Oil Rule and Burning Used Oil On-Site**, you must:
- follow all of the above-listed requirements.
- have a used oil burner with a maximum capacity of not more than 500,000 Btu/hr.
- install the used oil burner in the garage area (not the shop's office) and in accordance with the regulations of the Indiana Department of Fire & Building Services. [Fire & Building Services]
- vent the heater's combustion gases outside of the building. Note that the used oil burner cannot be connected to the heating duct work. [Fire & Building Services]
- burn only used oil that the shop generates or used oil received from households that bring their used oil to your shop.

! If you are following the **Solid and Hazardous Waste Rules**, you must:
- determine if your used oil is a hazardous waste. If the oil is considered to be a hazardous waste, it must be managed according to the hazardous waste rules (see Chapter 3.)
- if your used oil is not a hazardous waste, it still must be managed under IDEM's solid waste rules and sent to a facility that is permitted to accept this type of waste.

You Should:

! follow the Used Oil Rule.

! send your used oil to a permitted re-refining facility rather than sending it to a fuel-blender or burning it in your shop's used oil furnace.

! if you add waste fuels to your used oil, you should check with your hauler to ensure that they will accept the mixture.

! put designated drip pans under leaking vehicles while they are waiting to be repaired. Empty the designated drip pan when you move it from one vehicle to another or when the pan is half full (to avoid spills.) Designate specific drip pans for used oil, antifreeze and other liquid wastes to avoid mixing the wastes.

! drain and replace oil and other fluids in an area where there are no connections to the storm drain or the municipal sewer.

! place oil collection/drip pans under vehicles and lubricating operations to contain oil spills.

- place oil collection containers in close proximity to vehicle service areas. Reducing the distance used oil must be carried will reduce the likelihood of drips or spills reaching the shop floor.
- scoop up oil spills using either a squeegee and a dust pan or a shop vac, and pour the oil into your used oil tank or container. By cleaning up spilled oil in this manner, you will avoid generating and managing spill material clean-up waste. Remember that you must make a hazardous waste determination on spill material clean-up waste unless your shop is following the Used Oil Rule **and** the spill material is burned for energy recovery. (See Section 3.8 for more information on spills.)
- segregate the different types of oils (e.g., used brake fluid, transmission fluid, etc.) generated at your shop unless your oil recycling company advises otherwise. Used oil haulers have differing restrictions regarding the mixing of used oils.
- if you know that your used oil has been contaminated with a substance that is not allowed by your used oil hauler, you should inform your hauler of this before your used oil is picked up. Some haulers do not test used oil prior to picking it up. Rather, they take a sample from each shop for later analysis, if needed. Once the entire load reaches the refinery, the load is tested. If the load does not meet the requirements, the service company will run the small samples from each shop to determine who is responsible for the contamination. The service company may then assess an additional fee to the shop responsible for contaminating the entire load.

You Should Consider:

- starting an oil collection program to recycle used oil from household do-it yourselfers.

BACKGROUND ON OPTIONS TO CONSIDER

Starting a Do-It-Yourself (DIY) Oil Collection Program

The United States EPA estimates that millions of gallons of used oil are released into the environment each year by household do-it-yourselfers. By participating in a do-it-yourself (DIY) oil collection program, you can help prevent oil waste from polluting the environment and can also demonstrate your commitment to customer service and your community.

Prior to starting a DIY collection program, you must contact the Plan Review Division of the Indiana Department of Fire & Building Services to ensure that you are following applicable regulations. Your shop must also follow the management standards of IDEM's Used Oil Rule, accept DIY used oil, and send the DIY oil to a recycler or burn it for energy recovery.

Many used oil transporters will pick up your used oil, including used oil that is collected from DIY, at no charge if you have a minimum of 200 gallons of used oil per pick-up. Some used oil transporters will also provide you with a double-walled oil storage tank and will train your staff in the proper collection of DIY used oil. Contact your used oil transporter to request additional information about participating in a DIY oil collection program or obtain the list of used oil recyclers via the Fax-On-Demand and request information on DIY programs.

Some suggestions for implementing a used oil recycling program include:

- Offer special reusable containers to do-it-yourselfers. Avoid accepting other used oil containers.
- Use a separate drum or tank for do-it-yourselfer oil to avoid potential contamination of your own used oil.
- Visually inspect used oil brought in by do-it-yourselfers. Do not accept suspicious materials.
- Have the do-it-yourselfers sign a log with a statement verifying the material is used oil only.
- Post a sign and provide written materials describing your program.
- Include this public service and any other environmental efforts in your advertisements.